

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of

Borcherng Hong et al.

U.S. Patent Application No. 10/542,176

Filed: January 6, 2006

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: Confirmation No. 8422

: Group Art Unit: 1625

: Examiner: Dentz, Bernard

Title: METHOD OF PREPARATION OF HETEROCYCLIC MOLECULES WITH
PHARMACEUTICAL, PHARMACEUTICAL EXCIPIENT, COSMECEUTICAL,
AGROCHEMICAL AND INDUSTRIAL USES

REPLY TO REQUIREMENT FOR RESTRICTION AND ELECTION OF SPECIES

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is in response to the Office Action dated December 5, 2007, having a shortened statutory period for reply set to expire on January 5, 2008.

Authorization is hereby given to treat this and any future reply, which requires or might require a petition for an extension of time under 37 CFR § 1.136(a) for its timely submission or payment of fee, as incorporating a petition for extension of time for the appropriate length of time and an authorization to pay any required fees from Deposit Account No. 50-4296.

Requirement for Restriction and Election of Species

This action requires restriction under 35 U.S.C. 121 among Groups I-XVIII. Applicant respectfully elects, with traverse, Group II, (claims 8, 11, 18, 21, and 22), drawn to methods of

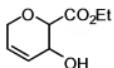
making dihydropyran carboxylic acids of Formula H and said dihydropyran carboxylic acids of Formula H. Applicant reserves the right to file divisional applications on the subject matter not elected under this response.

Applicant traverses the examiner's requirement for restriction since the restriction is directed to subject matter so linked as to form a single general inventive concept under PCT Rule 13.1. According to PCT Rule 13.2, the requirement of unity of invention under PCT Rule 13.1 is fulfilled with respect to a group of inventions when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The examiner's requirement for restriction is directed to groups of subject matter which have a technical relationship involving several of the same or corresponding special technical features. For example, the subject matter of the present invention, as a whole, relates to carbohydrate mimetic compounds, methods for their synthesis employing ring closing metathesis (RCM) and/or enzymatic resolution (ER), and intermediates useful in such methods. As such, many of the groups among which the examiner has required restriction share a special technological feature as individual steps or intermediates in a larger process. For example, the compounds of formula G (claims 6-7, Group I) are disclosed as starting materials for methods of synthesizing compounds of formula H (claims 8, 11, 18, 21, and 22, Group II) or resolving individual stereoisomers of formula H (claims 23, 28, 32, Group III), which may further function as starting materials for methods of synthesizing compounds of formula J (claims 34-35, and 38-40, Groups IV-V), which may further function as starting materials for methods of synthesizing compounds of formula K (claim 54, Group VI), and so on. Accordingly, applicant respectfully suggests that the claimed subject matter possesses unity of invention as required by PCT Rule 13.

Even if the presently pending claims can be shown to be directed towards multiple separate or distinct inventions, "the examiner, in order to establish reasons for insisting upon restriction, must explain why there would be a serious burden on the examiner if restriction is not required." M.P.E.P. 808.02. No such explanation has been presented in this case. Accordingly, applicant respectfully suggests that the examiner has failed to meet the required burden for a proper requirement for restriction.

In light of the above, the requirement for restriction under 35 U.S.C. 121 and 372 is improper and should be withdrawn.

In response to the election of species requirement under 35 U.S.C. 121, applicant provisionally elects, for search purposes only, the compound of Example 3 – (2S,3S) 3-hydroxy-3,6-dihydro-2H-pyran-2-carboxylic acid ethyl ester, the structure of which is:



Claims 8, 11, 18, 21, and 22 read upon the elected species.

For example, 3 – (2S,3S) 3-hydroxy-3,6-dihydro-2H-pyran-2-carboxylic acid ethyl ester falls within the provisionally elected Group II of claim 21 as follows:

R₁ is alkyl;

R₂ is hydrogen;

R₅ is hydrogen; and

R₉ is hydrogen.

It is respectfully submitted that the claims are in condition for allowance. Notification to this effect is earnestly solicited. The Examiner is invited to contact the undersigned attorney at the telephone number provided below if such would advance the prosecution of the case. Please continue to direct all correspondence to Global Patent Group at 10411 Clayton Road, Suite 304 in St. Louis, MO 63131.

Respectfully submitted,

/Dennis A. Bennett/

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Dated January 5, 2008